



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/701,083	11/05/2003	Doo-seop Eom	Q76216	6301

23373 7590 02/09/2006

SUGHRUE MION, PLLC
2100 PENNSYLVANIA AVENUE, N.W.
SUITE 800
WASHINGTON, DC 20037

EXAMINER

FIGUEROA, MARISOL

ART UNIT	PAPER NUMBER
----------	--------------

2681

DATE MAILED: 02/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/701,083

Applicant(s)

EOM ET AL.

Examiner

Marisol Figueroa

Art Unit

2681

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11/05/2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Action is in response to applicant's amendment filed on 11/10/2005. Claims 1-12 are pending in the present application.

Information Disclosure Statement

2. The Information Disclosure Statement filed on 01/19/2006 has been considered by the Examiner.

Response to Arguments

3. Applicant's arguments with respect to claims 1-13 have been considered but are moot in view of the new ground(s) of rejection.

Drawings

4. The drawings are objected to because on the box of step S905 the word --device-- is apparently missing after "communication". Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet"

Art Unit: 2681

pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-5, 7-11, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Melpignano et al. (US 2003/0003912 A1) in view of Davies et al. (US 6,816,730 B2).

Regarding claim 1, Melpignano discloses a wireless communication system, comprising:

a first communication device (Access Point AP1) for carrying out an inquiry and paging with respect to a wireless communication device (Mobile Terminal MT) located within a communication allowance range (P.0060; P.0075; when the mobile terminal is located within the range of an access point or Bluetooth device, it is found by a discovery/inquiry procedure according to Bluetooth standards), and starting a connection with the wireless communication device (P.0080, lines 1-5); and

a second communication device (Access Point AP2) for receiving and transmitting data with the wireless communication device (Mobile Terminal MT) when the wireless communication device connected with the first communication device is cut off by a hard hand-off (P.0080, lines 9-19; P.0019, lines 1-6; the mobile terminal establishes a communication with a second access point when the connection with the first access point weakens and the mobile communication terminal is

Art Unit: 2681

handed over by a hard handoff to the second access point thus releasing the original connection with the first access point);

wherein the first communication device, transmits to the second communication device information on an address and a clock of the wireless communication device which are determined based on the inquiry (P.0100; P.0101, lines 1-5; the first access point transmits information to the second or neighboring access point regarding the address and clock offset of the mobile terminal in a page request message), and if the first communication is disconnected with the wireless communication device, the second device carries out paging with respect to the wireless communication devices based on the received information on the address and clock to start a connection with the wireless device (P.0014, lines 8-13; P.0100; P.0101; lines 1-5; P.102-103; the page request message triggers the paging of the mobile terminal by the second access point which is triggered upon a handoff request that indicates that the link with the first access point is weak, i.e. disconnected).

However, Melpignano fails to disclose wherein the first communication device transmits information of the wireless communication device (e.g. address and clock) to the second communication device when connection is established with the wireless communication device. Davies teaches a network of beacons (figure 1) including a first beacon in charge of inquiring users mobile devices in its range and receiving a reply with an identifier (e.g. address and clock) from the mobile devices and transmitting the received identifier to selected second beacon that later on interact with the mobile devices (col.1, lines 66 – col.2, lines 1-5; col.4, lines 19-43). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention for the first communication device to transmit the information to the second communication device when connection is established (e.g. inquiry) between the first communication device and the wireless

Art Unit: 2681

device as suggested by Davies, in order to save considerable amount of time in attempts to establish a connection with a new access point.

Regarding claim 8, Melpignano discloses a communication method for wireless communication systems, comprising: starting data reception and transmission of a first communication device (Access Point AP1) with a wireless communication device located within a communication allowance range based on the inquiry and paging (P.0080, lines 1-5; when the mobile terminal is within the coverage area of the first access point AP1 communication is started and maintained as long the mobile terminal remains in the coverage area of the access point 1); transmitting from the first communication device to a second communication device information on an address and clock of the wireless communication device which is determined at least based on the inquiry (P.0100; P.0101, lines 1-5; the first access point transmits information to the second or neighboring access point regarding the address and clock offset of the mobile terminal in a page request message); carrying out the paging with respect to the wireless communication device by the second communication device, based on the received address and clock information, if the wireless communication device is disconnected with the first communication device by a hard hand-off; and starting the data reception and transmission of the wireless communication device with the second communication device by the carrying-out of the paging (P.0014, lines 8-13; P.0100; P.0101; lines 1-5; P.102-103; the page request message triggers the paging of the mobile terminal by the second access point which is triggered upon a handoff request that indicates that the link with the first access point is weak, i.e. disconnected).

Although Melpignano fails to specifically disclose carrying out an inquiry and a paging by the first communication device and obtaining an address and clock information from the inquiry,

Art Unit: 2681

however in a Bluetooth system establishing inquiry and paging to obtain information identifying the wireless device and to establish a communication is a process well known to those skilled in the art.

Furthermore, Melpignano fails to disclose wherein the information about address and clock of the wireless communication devices is transmitted when said first communication device connects with said wireless communication device. Davies teaches a network of beacons (figure 1) including a first beacon in charge of inquiring users mobile devices in its range and receiving a reply with an identifier (e.g. address and clock) from the mobile devices and transmitting the received identifier to selected second beacon that later on interact with the mobile devices (col.1, lines 66 – col.2, lines 1-5; col.4, lines 19-43). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention for the first communication device to transmit the information to the second communication device when connection is established (e.g. inquiry) between the first communication device and the wireless device as suggested by Davies, in order to save considerable amount of time in attempts to establish a connection with a new access point.

Regarding claims 2 and 9, the combination of Melpignano and Davies disclose the wireless communication system and method as claimed in claims 1 and 8, Melpignano further discloses wherein the first communication device and the second communication device are connected by a wire network (P.0059, lines 1-12).

Regarding claims 3 and 10, the combination of Melpignano and Davies disclose the wireless communication system and method as claimed in claims 2 and 9, Melpignano further discloses wherein the first communication device, the second communication device, and the wireless communication device are respectively provided with a Bluetooth system (P.0013, lines 4-8; P.0060, lines 1-3).

Regarding claims 4 and 11, the combination of Melpignano and Davies disclose the

Art Unit: 2681

wireless communication system and method as claimed in claims 2 and 9, Melpignano further discloses wherein the first communication device, after being connected with the wireless communication device, checks a connection state with the wireless communication device at every predetermined period (P.0092; the first communication device AP1 measures the link quality for determining when a handoff is necessary; it is common knowledge in the art that these measurements are made periodically), and, if the first communication device is disconnected from the wireless communication device, the second communication device is instructed to perform the paging with respect to the wireless communication device (P.0100-0102).

Regarding claim 5, the combination of Melpignano and Davies disclose the wireless communication system and method as claimed in claim 4, Melpignano further discloses wherein the second communication device is instructed by the first communication device (P.0100; P.0102; the AP1 informs its neighbors AP's of a handoff request therefore starting paging the mobile terminal).

Regarding claims 7 and 13, the combination of Melpignano and Davies disclose the wireless communication system and method as claimed in claims 4 and 11, Melpignano further discloses wherein the wireless communication device scans the paging carried out by the second communication device (P.0093; P.0100-0102; the mobile terminal enters into a continuous page scan after the handoff request).

7. **Claims 6 and 12** are rejected under 35 U.S.C. 103(a) as being unpatentable over Melpignano et al. in view of Davies et al. as applied to claims 1-5, 7-11, and 13 above, and further in view of Applicant's Admitted Prior Art and Coppage (US 6,741,687 B1).

Regarding claims 6 and 12, the combination of Melpignano and Davies disclose the wireless communication system and method as claimed in claims 4 and 11, but fails to disclose wherein data packets received and transmitted after the connection of the first communication

Art Unit: 2681

device with the wireless communication device comprise an activation address indicating an activation state of the wireless communication device. However, the Applicant's description of the Prior Art, teaches that when two or more slaves are connected to one master in the piconet, the master allocates a temporary three-bit address to each address used for slave identification when each slave is activated, and "every packet exchanging between the master and the slave carries an activation request address (AM-ADDR)". The AM-ADDR (e.g. activation address) is used as an identification factor for identifying active members participating in a piconet (page 3, line 19 – page 4, lines 1-3). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention for the packets received and transmitted after the connection of the first communication device and a wireless communication device to comprise an activation address indicating the activation state of the wireless communication device as admitted by the Applicant (page 3, line 19 – page 4, lines 1-3), because is a process that is well known that is performed between masters and slaves in a piconet.

Nevertheless, the combination of Melpignano, Davies, and Applicant's admitted Prior Art fails to disclose wherein if the activation address is not received through a time slot of a predetermined period allocated to the wireless communication device, the first communication device decides that the connection with the wireless communication device is cut off. Coppage teaches a first client device that employ a timeout value for receiving a "keep alive" signal from a control network entity, and the first client device detects a disconnection (e.g. cut off) of the session when the "keep alive" signal is not received during the preprogrammed time period (col.12, lines 33-38). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention for the first communication device to decide that the communication device is cut off when an activation address is not received through a time slot of a predetermined period as

Art Unit: 2681

suggested by Coppage, because this indicates a period of inactivity as a consequence that the wireless device is no longer in the communicable range of the communication device.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

9. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marisol Figueroa whose telephone number is (571) 272-7840. The examiner can normally be reached on Monday Thru Friday 8:30 a.m. - 5:00 p.m..

11. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on (571) 272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2681

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Marisol Figueroa
Art Unit 2681


JOSEPH FEILD
SUPERVISORY PATENT EXAMINER